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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,446

05/18/2006

Esko Saarela

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EXAMINER

LU, JIPING

ART UNIT

PAPER NUMBER

3743

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,446	Applicant(s) SAARELA ET AL.	
	Examiner Jiping Lu	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 14-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/20/06 & 5/15/06</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-13 in the reply filed on 9/18/08 is acknowledged.

2. Claims 14-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 9/18/08.

Information Disclosure Statement

3. The information disclosure statement filed 4/20/06 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because applicant failed to provide a blank space for each document to be considered. Applicant has listed two equivalent documents with one blank space which is improper. These references have been lined through by the examiner. The information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because the using of phrases "The invention comprises", "The invention also comprises", "The invention furthermore comprises", and "According to the invention" in the abstract is improper. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

6. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim

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indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1 and 7 recite the broad recitation "bulk material", and the claims also recite "especially bark, sawdust, pretreated sludge or a mixture of these" which is the narrower statement of the range/limitation.

8. Regarding claim 1, the word "means" is preceded by the word(s) "drying conveyors" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Kopp-Sorensen (EP 0552583).

Kopp-Sorensen shows an apparatus for drying bulk material comprising a drying space (within 9), at least one gas heating device 25, a blower 30 located outside the drying space,

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which blower 30 is arranged to blow gas into the drying space via said gas heating device 25, several drying conveyors 8 located in the drying space, through which drying conveyor the heated gas is arranged to travel, connectors (not number, see Fig. 2, at lower part of 25) for conducting water into and out of the gas heating device 25, which gas heating device 25 is arranged to heat gas with water and simultaneously to cool water with said gas. As for the limitations, “an apparatus for drying bulk material, especially bark, sawdust, pretreated sludge or a mixture of these” in lines 1-2 of claim 1, “connectors for conducting waste water produced in a pulp or paper production process into and out of the gas heating device, which gas heating device is arranged to heat gas with waste water and simultaneously to cool waste water with said gas” in last four lines of claim 1, they are viewed as functional or intended use limitations. As MPEP 2114 states, “[a] claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim”. In this case, the limitations above do not add any structural limitations to the claim and Kopp-Sorensen discloses all the structural limitations. Additionally while not disclosed, the apparatus of Kopp-Sorensen is capable of being used for drying bulk material, especially bark, sawdust, pretreated sludge or a mixture of these, and the connectors of Kopp-Sorensen is capable of conducting waste water produced in a pulp or paper production process into and out of the gas heating device.

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Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kopp-Sorensen (EP 0552583) in view of Mason (GB 283,014).

The drying apparatus of Kopp-Sorensen above includes all that is recited in claims 8-12 except for a chain conveyor with its detail structure. Mason teaches a drying apparatus with a chain conveyor 11 same as claimed. The chain conveyor 11 is equipped with a drive apparatus 19 and a wire 17 supported by the chain conveyor and running on the chain conveyor 11. The heated gas is arranged to travel through a bed of material to be dried lying on the wire 17 and through the wire 17 (page 2, lines 57-96). The wire 17 and the chain conveyor 11 are substantially equal in width. The chain conveyor 11 has two chains 13 and, between these, wire support members 14. Therefore, it would have been obvious to one having ordinary skill in the

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art at the time the invention was made to modify the drying apparatus of Kopp-Sorensen to substitute the chain conveyor with two chains, wire and wire support members of Mason for the conveyor of Kopp-Sorensen in order to pursue an intended use. With regard to the claimed width of wire in claim 10, it would have been obvious to one having ordinary skill in the art at the time the invention was made to design the width of wire at any desired size in order to pursue an intended use, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In *re Aller*, 105 USPQ 233. As for the limitation, “the speed of the chain conveyor is 0.02-0.1 metres per second” in claim 12, it is viewed as functional or intended use limitations. As MPEP 2114 states, “[a] claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim”. In this case, the limitation above does not add any structural limitations to the claim and the drying apparatus of Kopp-Sorensen as modified by Mason discloses all the structural limitations. Additionally while not disclosed, the chain conveyor of Mason is capable of being moved at the speed of 0.02-0.1 metres per second.

14. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kopp-Sorensen (EP 0552583) in view of Dinh (U. S. Pat. 5,343,632) or Lambert (U. S. Pat. 4,490,924).

The drying apparatus of Kopp-Sorensen above includes all that is recited in claim 13 except for the gas heating device is arranged inside the drying space. Dinh teaches a drying apparatus with at least one gas heating device 760 arranged inside the drying space (see Fig. 7) same as claimed. Lambert teaches a drying apparatus with at least one gas heating device 21

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arranged inside the drying space 17 same as claimed. Therefore, it would have been obvious to one having ordinary in the art at the time the invention was made to modify the drying apparatus of Kopp-Sorensen to locate the gas heating device inside the drying space as taught by Dinh or Lambert in order to pursue an intended use.

15. Claims 1, 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert (U. S. Pat. 4,490,924) in view of Salokangas (GB 2171401A).

Lambert shows a method for drying bulk material comprising the steps of conveying the material to be dried by means of conveyor 11 located in the drying space 12-17, feeding gas 19 into the drying space, heating the gas (by heat exchanger 21), conducting the heated gas through the drying conveyor 11 conveying the material to be dried, conducting the gas that has passed through the drying conveyor 11 out of the drying space (thru exhaust 22). The gas 19 is heated with water whereby said water is simultaneously cooled. The gas to be heated is air (see Fig. 1). The temperature of the heated gas is 150°F which is within the range of 35-85°C. The gas is heated in the heat exchanger 21 in the drying space. Lambert discloses the claimed invention except for the gas is heated with waste water produced in a pulp or paper production process. Salokangas teaches a concept of using waste water for heating air thru a heat exchanger 5 same as claimed (see abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the drying method of Lambert to include the step of heating the gas with waste water as taught by Salokangas in order to conserve energy and save cost. With regard to the claimed using waste water produced in a pulp or paper production process, it would have been an obvious matter of use of a known product (waste water results from pulp or paper production process) in order to obtain a predictable result and pursue an

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intended use, since applicant has not disclosed that the claimed using of waste water from pulp or per production process solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill in the art and it appears that the claimed feature does not distinguish the invention over similar features in the prior art since, the drying method of Lambert as modified by Salokangas will perform the invention as claimed by the applicant with the using of any kind of the waste water.

16. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert (U. S. Pat. 4,490,924) in view of Salokangas (GB 2171401A) as applied to claim 1 as above, and further in view of Mason (GB 283,014).

The drying method of Lambert as modified by Salokangas as above includes all that is recited in claims 2-3 except for a chain conveyor for conveying material to be dried. Mason teaches a drying method which uses a chain conveyor 11 for conveying the material to be dried same as claimed. The chain conveyor 11 is equipped with a drive apparatus 19 and a wire 17 supported by the chain conveyor and running on the chain conveyor 11. The heated gas is arranged to travel through a bed of material to be dried lying on the wire 17 and through the wire 17 (page 2, lines 57-96). The wire 17 and the chain conveyor 11 are substantially equal in width. The chain conveyor 11 has two chains 13 and, between these, wire support members 14. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the drying method of Lambert to include a step of conveying the material to be dried by a chain conveyor as taught by Mason in order to pursue an intended use.

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Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fasano (U. S. Pat. 4,253,825) shows a dryer with conveyors and heat exchanger. Bonney, Jr. (U. S. pat. 2,678,125) shows a chain conveyor with two chains, wire and wire support.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KENNETH RINEHART can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jiping Lu/
Primary Examiner
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J. L.

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